

Claims

1. A composition comprising a polynucleotide which encodes a polypeptide having the characteristic of eliciting an immune response protective against disease or death caused by a rickettsial pathogen, wherein said polypeptide comprises the amino acid sequence of SEQ ID NO: 32 or an immunogenic fragment thereof.
2. The composition, according to claim 1, wherein said rickettsial pathogen is selected from the group consisting of *Rickettsia* spp., *Ehrlichia* spp., *Anaplasma* spp., and *Cowdria* spp.
3. The composition, according to claim 1, wherein said polynucleotide comprises the nucleic acid sequence of SEQ ID NO: 31 and fragments thereof which encode immunogenic polypeptides.
4. The composition, according to claim 1, wherein said polynucleotide further comprises a nucleic acid vaccine vector.
5. The composition, according to claim 1, further comprising a pharmaceutically acceptable carrier.
6. A polynucleotide encoding a polypeptide comprising SEQ ID NO. 32 and fragments thereof.
7. The polynucleotide according to claim 6, wherein said polynucleotide comprises the nucleic acid sequence of SEQ ID NO: 31 and fragments thereof.

8. A method for protecting a susceptible host against disease or death caused by a rickettsial pathogen, said method comprising administering an effective amount of a polynucleotide encoding polypeptide according to claim 1.

9. The method, according to claim 8, wherein said rickettsial pathogen is selected from the group consisting of *Rickettsia* spp., *Ehrlichia* spp., *Anaplasma* spp., and *Cowdria* spp.

10. The method, according to claim 10, wherein said polynucleotide comprises SEQ ID NO. 31, and fragments thereof.

11. The method, according to claim 10, wherein said nucleic acid further comprises an appropriate nucleic acid vector.

12. The method, according to claim 10, wherein said composition further comprises a pharmaceutically acceptable carrier.

13. The method, according to claim 10, which further comprises administration to said host a polypeptide comprising SEQ ID NO: 32, or immunogenic fragments thereof.

14. The method according to claim 10, wherein said polynucleotide comprises a sequence encoding a polypeptide that begins at base 67 of SEQ ID NO:31.